

## **In the Specification**

On Pages 94 and 95 of the specification please amend the following paragraph:

### **Example 50**

#### **CYTOSENSOR Cytosensor<sup>®</sup> Studies**

T-47D cells (mammary ductal carcinoma cell line, obtained from American Type Culture Collection) were suspended at a density of  $1 \times 10^7$  cells/mL in running buffer (low-buffered, serum-free, bicarbonate-free RPMI 1640 medium from Molecular Devices of Sunnyvale, California). Approximately 100,000 cells were then immobilized in an agarose cell entrapment medium in a 10  $\mu$ L droplet and sandwiched between two 3- $\mu$ m polycarbonate membranes in a cytosensor capsule cup. Cytosensor capsule cups placed in sensor chambers on the CYTOSENSOR Cytosensor<sup>®</sup> Microphysiometer, an assay sensor, were then held in very close proximity to pH-sensitive detectors. Running buffer was then pumped across the cells at a rate of 100  $\mu$ L/min except during 30-second intervals when the flow was stopped, and acidification of the running buffer in the sensor chamber was measured. Acidification rates were determined every 2 minutes. The temperature of the sensor chambers was 37°C. Cells were allowed to equilibrate in the sensor chambers for 2-3 hours prior to the start of the experiment during which time basal acidification rates were monitored. Cells were then exposed to test compounds (Salmon Calcitonin or Octyl-Di-Calcitonin) diluted in running buffer at various nM concentration. Exposure of cells to test compounds occurred for the first 40 seconds of each 2 minute pump cycle in a repeating pattern for a total of 20 minutes. This allowed sufficient exposure of the cells to the test compounds to elicit a receptor-mediated response in cellular metabolism followed by approximately 50 seconds of flow of the running buffer containing no compounds. This procedure rinsed away test solutions (which had a slightly lower pH than running buffer alone) from the sensor chamber before measuring the acidification rate. Thus, the acidification rates were solely a measure of cellular activity. A similar procedure was used to obtain data for PEG7-octyl-sCT, monoconjugate (Octyl-Mono); PEG7-decyl-sCT, monoconjugate (Decyl-Mono); PEG7-decyl-sCT, diconjugate (Decyl-Di); stearate-PEG6-sCT, monoconjugate (PEG6 St. Mono); and stearate-PEG8-sCT, monoconjugate (PEG8 St. Mono). Data was analyzed for relative activity of compounds by calculating the Area Under the Curve (AUC) for each cytosensor chamber acidification rate graph and plotted as a bar chart illustrated in **Figure 14** showing average AUC measurements taken from multiple experiments performed under the same experimental conditions.

On page 2 please amend the following paragraph:

The polydispersity of the polymer mixtures and conjugates described in Ekwuribe is likely a result of the use of polydispersed polyethylene glycol (PEG) in the polymer synthesis. PEG is typically produced by base-catalyzed ring-opening polymerization of ethylene oxide. The reaction is initiated by adding ethylene oxide to ethylene glycol, with potassium hydroxide as catalyst. This process results in a polydispersed mixture of polyethylene glycol polymers having a number average molecular weight within a given range of molecular weights. For example, PEG products offered by Sigma-Aldrich of Milwaukee, Wisconsin are provided in polydispersed mixtures such as PEG 400 ( $M_n$  380-420); PEG 1,000 ( $M_n$  950-1,050); PEG 1,500 ( $M_n$  1,400-1,600); and PEG 2,000 ( $M_n$  1,900-2,200).

On page 10, please amend the following paragraph:

**Figure 14** illustrates a comparison of the average Area Under the Curve (AUC) [[AUCs]] for various mixtures of calcitonin-oligomer conjugates according to embodiments of the present invention with non-conjugated calcitonin, which is provided for comparison purposes only and does not form part of the invention.